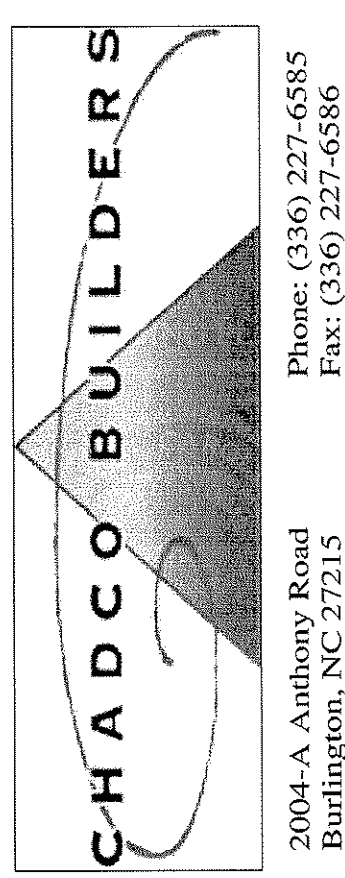


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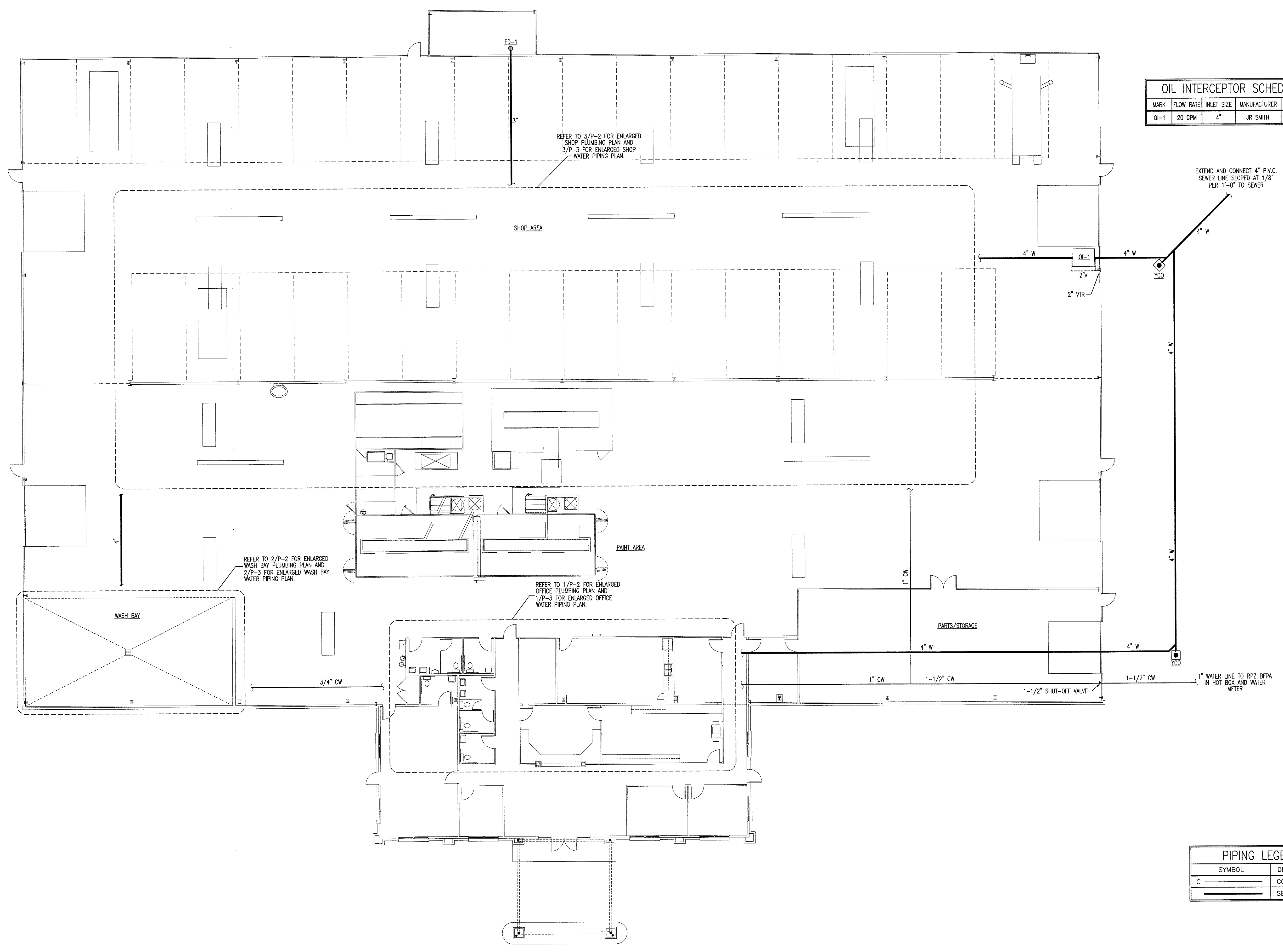
**NEW BUILDING FACILITY:
DARRELL ALLEN
BODY SHOP**
Burlington, North Carolina

DRAWING NAME
**OVERALL
PLUMBING PLAN**



DRAWN
MJW
CHECKED
MKR
DATE
3/18/09
SCALE
AS NOTED
FOR NO.
9008
SHEET

P-1



OIL INTERCEPTOR SCHEDULE

MARK	FLOW RATE	INLET SIZE	MANUFACTURER	MODEL
OI-1	20 GPM	4"	JR SMITH	8520

EXTEND AND CONNECT 4" P.V.C. SEWER LINE SLOPED AT 1/8" PER 1'-0" TO SEWER

REFER TO 2/P-2 FOR ENLARGED WASH BAY PLUMBING PLAN AND 2/P-3 FOR ENLARGED WASH BAY WATER PIPING PLAN.

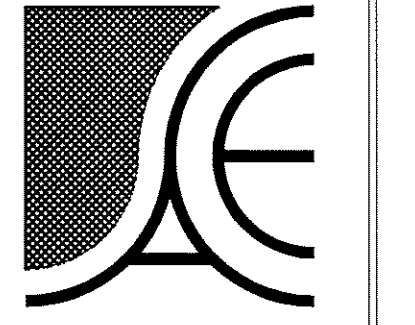
REFER TO 1/P-2 FOR ENLARGED OFFICE PLUMBING PLAN AND 1/P-3 FOR ENLARGED OFFICE WATER PIPING PLAN.

REFER TO 3/P-2 FOR ENLARGED SHOP PLUMBING PLAN AND 3/P-3 FOR ENLARGED SHOP WATER PIPING PLAN.

**OVERALL
PLUMBING PLAN**
SCALE: 3/32" = 1'-0"

PIPING LEGEND

SYMBOL	DESCRIPTION
C	COLD WATER
---	SEWER PIPING

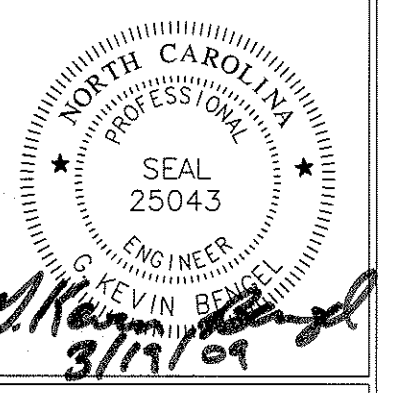


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**NEW BUILDING FACILITY:
 DARRELL ALLEN
 BODY SHOP**
 Burlington, North Carolina

DRAWING NAME
ENLARGED PLUMBING PLANS

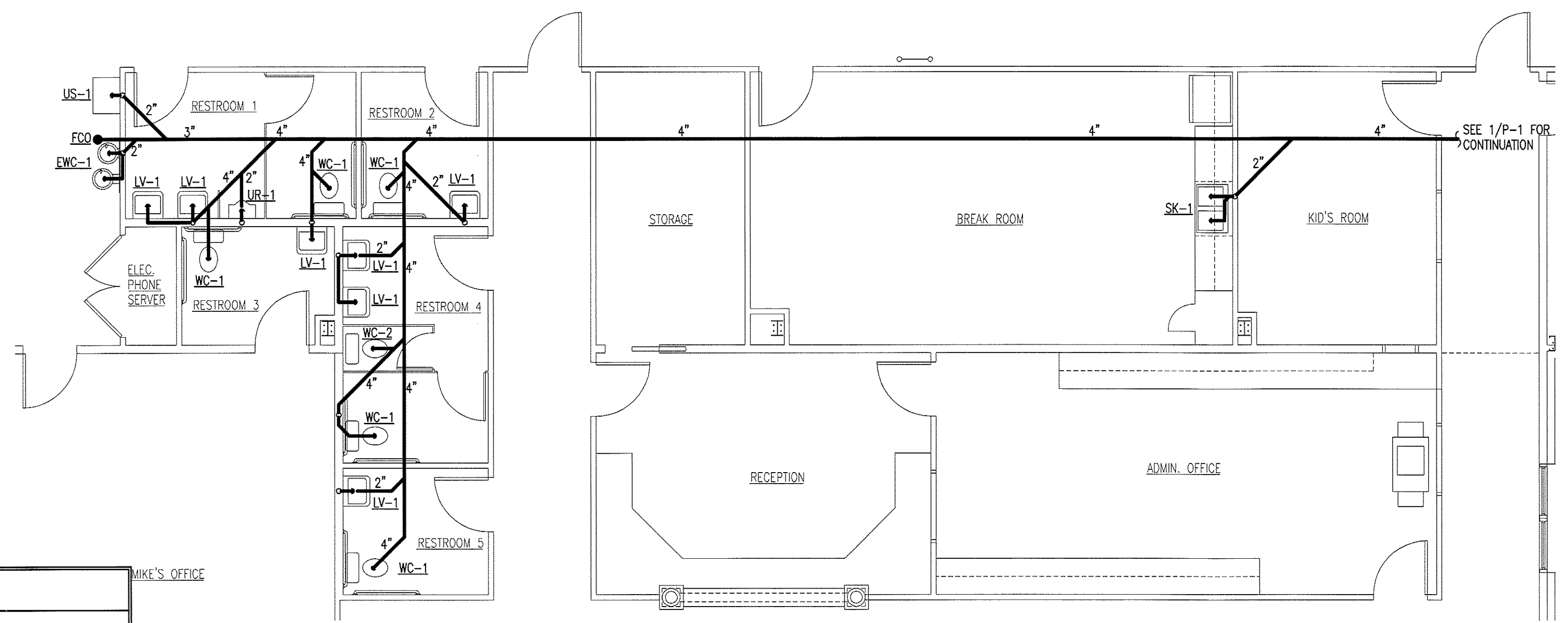


DRAWN: MJW
 CHECKED: MK
 DATE: 3/18/09
 SCALE: AS NOTED
 JOB NO.: 9008
 SHEET

P-2

WASTE AND WATER CALCULATIONS									
FIXTURE TYPE	QUANTITY	WASTE FIXTURE UNITS		HOT WATER FIXTURE UNITS		COLD WATER FIXTURE UNITS		TOTAL WATER FIXTURE UNITS	
		PER UNIT	TOTAL	PER UNIT	TOTAL	PER UNIT	TOTAL	PER UNIT	TOTAL
WATER CLOSET - TANK	6	4	24	0	0	5	30	5	30
LAVATORY	7	1	7	1.5	10.5	1.5	10.5	2	14
URINAL	1	4	4	0	---	5	5	5	5
FLOOR DRAIN	2	2	4	0	0	0	0	0	0
TRENCH DRAIN	6	3	18	0	0	0	0	0	0
DRINKING FOUNTAIN	1	0.5	0.5	0	0	0.25	0.25	0.25	0.25
SINK	1	2	2	1	1	1	1	1.4	1.4
UTILITY SINK	1	2	2	2.25	2.25	2.25	2.25	3	3
HOSE BIBB	10	0	0	0	0	0.5	5	0.5	5
ICE MAKER BOX	1	0	0	0	0	0.25	0.25	0.25	0.25
TOTAL			61.5			13.75	54.25		58.9

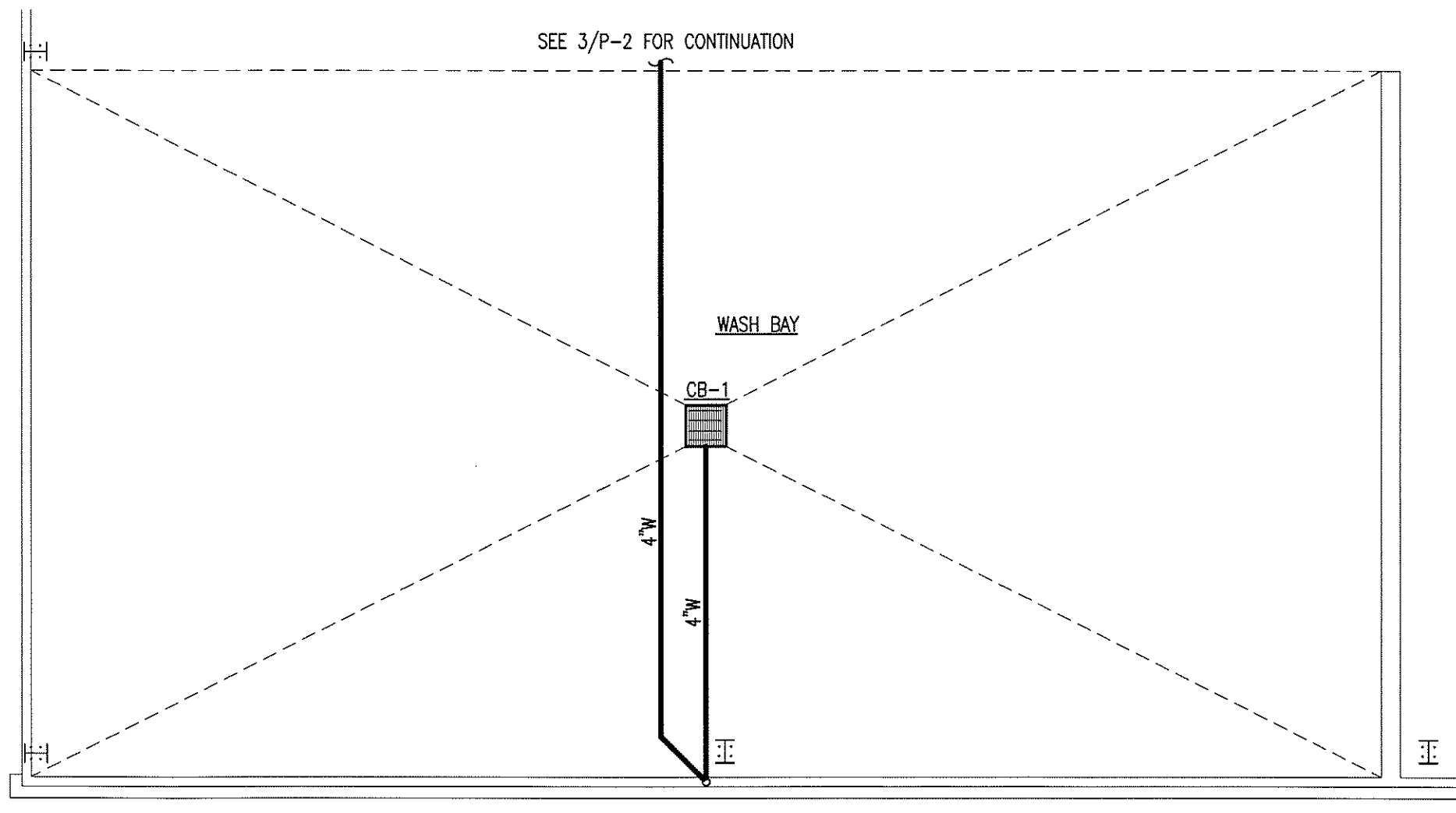
1. 4" WASTE LINE SLOPED AT 1/8" PER 1'-0" IS ADEQUATE FOR 180 FIXTURE UNITS
 2. 1-1/4" WATER LINE IS ADEQUATE FOR 35 GPM. GPM= 31.71



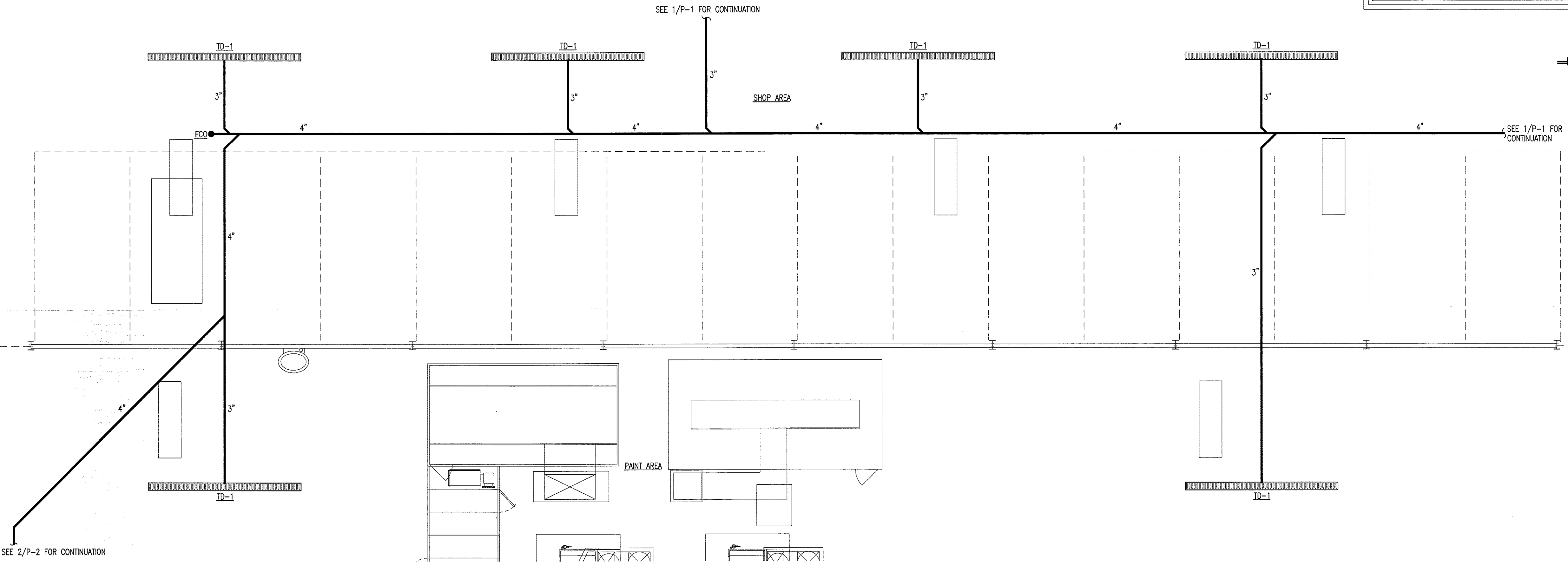
1
ENLARGED OFFICE PLUMBING PLAN
 SCALE: 3/16" = 1'-0"

ITEM NO.	FIXTURE DESCRIPTION	MANUFACTURER	* MODEL NO.	CONNECTION SIZES				REMARKS
				C.W.	H.W.	WASTE	VENT	
EW-1	ELECTRIC WATER COOLER - BI-LEVEL	SUNROC	ADAD8BL	1/2"	---	1-1/2"	1-1/2"	BI-LEVEL WATER COOLER
WC-1	WATER CLOSET - TANK TYPE	AMER. STD.	2898.012	1/2"	---	4"	2"	FLOOR MTD. 1.6 GAL/FLUSH, H.C. HEIGHT (OR EQUAL)
WC-2	WATER CLOSET - TANK TYPE	AMER. STD.	2898.012	1/2"	---	4"	2"	FLOOR MTD. 1.6 GAL/FLUSH, STANDARD HEIGHT (OR EQUAL)
UR-1	URINAL	AMER. STD.	6541.132	3/4"	---	2"	2"	1.0 GAL/FLUSH, H.C. HGT, SLOAN 186-1 FL. VALVE (OR EQUAL)
LV-1	WALL HUNG LAVATORY	AMER. STD.	0355.012	1/2"	1/2"	1-1/2"	1-1/2"	SINGLE LEVER FAUCET, TRUEBRO PIPING COVERS
SK-1	DOUBLE COMPARTMENT SINK	STERLING	PRO33226	1/2"	1/2"	1-1/2"	1-1/2"	SINGLE LEVER FAUCET, TRUEBRO PIPING COVERS (WHERE PIPING IS EXPOSED)
CB-1	CATCH BASIN	J.R. SMITH	3370	---	---	4"	---	
FD-1	FLOOR DRAIN	ZURN	Z-415-B	---	---	3"	1-1/2"	BODY ASSEMBLY WITH "TYPE B" STRAINER
TD-1	TRENCH DRAIN	ACO	KS100S	---	---	3"	---	20" x 1" WITH SLOTTED STEEL GRATES
US-1	UTILITY SINK	FIAT	FL-1	1/2"	1/2"	2"	1-1/2"	MTD. ON LEGS
IB-1	ICE MAKER BOX	PPP	MM-500-MMB	1/2"	---	---	---	MIP VALVE WITH SHOCK ARRESTOR
HB-1	CHROME HOSE BIBB	WOODFORD	24C	1/2"	---	---	---	MOUNT 36" A.F.F.
ED	FLOOR CLEAN OUT	ZURN	Z-1400	---	---	---	---	SIZE DETERMINED UPON WASTE PIPE
YCO	YARD CLEAN OUT	ZURN	Z-1470	---	---	---	---	WITH CONCRETE PROTECTION APRON

* FIXTURE MODEL NUMBERS LISTED ARE FOR DESCRIPTION ONLY.



2
ENLARGED WASH BAY PLUMBING PLAN
 SCALE: 3/16" = 1'-0"

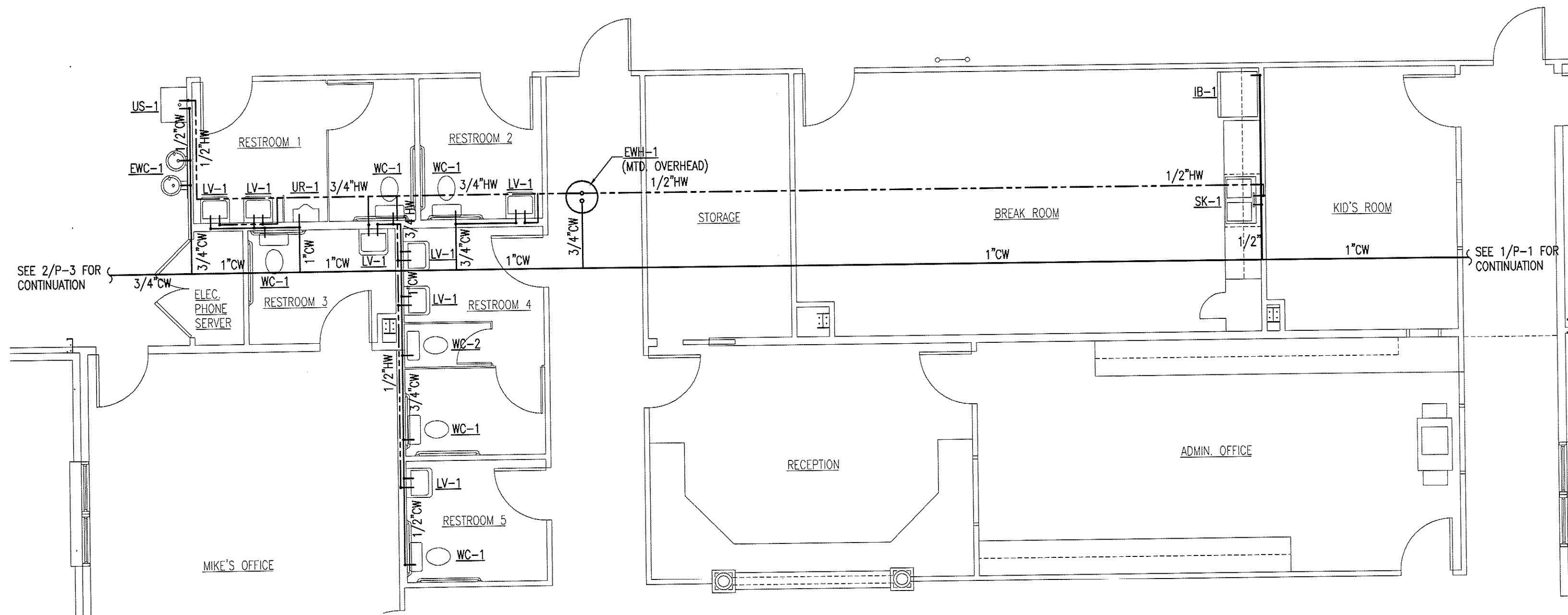


3
ENLARGED SHOP PLUMBING PLAN
 SCALE: 1/8" = 1'-0"

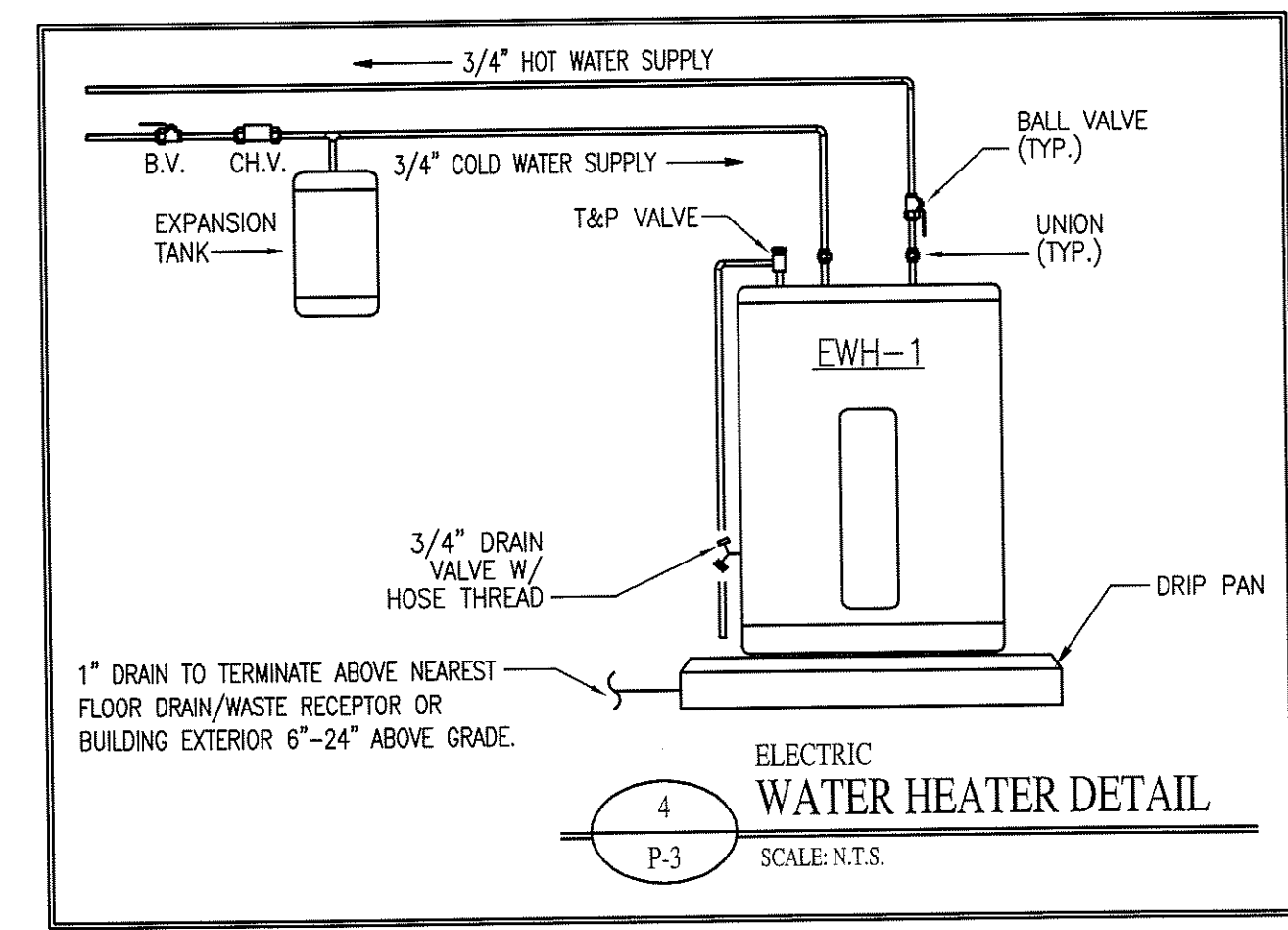
PIPING LEGEND	
SYMBOL	DESCRIPTION
	SEWER PIPING

PLUMBING NOTES:

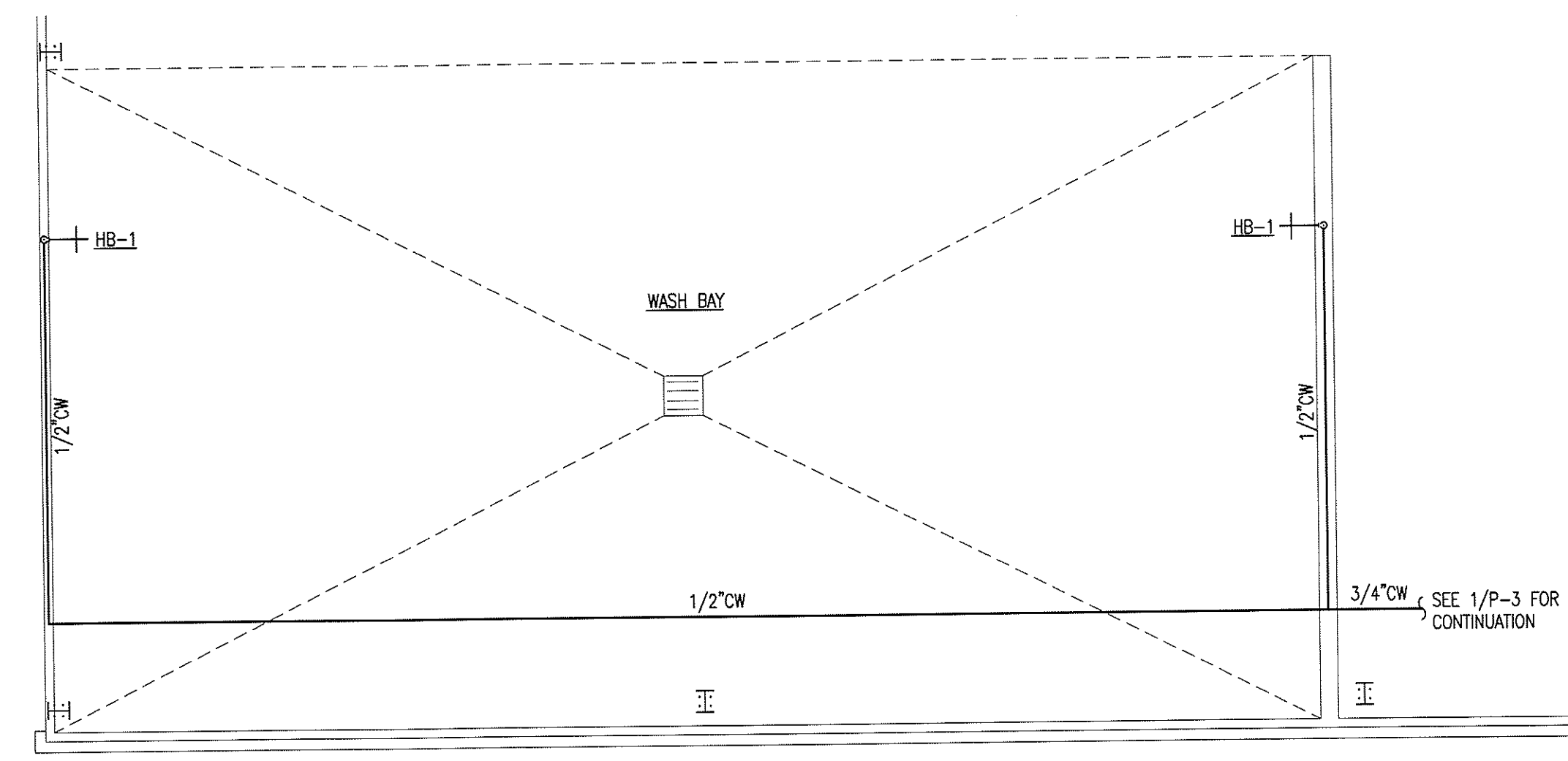
1. PLUMBING TO BE INSTALLED IN ACCORDANCE WITH ALL STATE AND LOCAL CODES.
2. PLUMBING CONTRACTOR TO COORDINATE ALL WORK WITH OTHER TRADES.
3. ALL WASTE AND VENT PIPING TO BE SCHEDULE 40 P.V.C.
4. WATER LINES TO BE COPPER TYPE K (SOFT DRAWN) BELOW SLAB, AND TYPE L HARD COPPER ABOVE SLAB.
5. ALL P.V.C. UNDER SLAB SHALL BE A MINIMUM OF 2" NPS.
6. COPPER PIPING TO BE INSULATED WHERE IT PASSES THROUGH CONCRETE.
7. CONTRACTOR TO VERIFY NEED FOR BACKFLOW PREVENTER ASSEMBLY (BPFA) WITH LOCAL AUTHORITIES. IF REQUIRED BPFA TO BE 1-1/2" RPZ TYPE. IF BUILDING BPFA IS INSTALLED, INSTALL EXPANSION TANK OR THERMAL EXPANSION VALVE UPSTREAM OF WATER HEATER. BPFA TO BE MOUNTED 12"-72" A.F.F. AND 6" OF CLEARANCE ON EACH END AND MEET MANUFACTURERS RECOMMENDED ACCESS REQUIREMENTS.
8. PLUMBING CONTRACTOR SHALL (OR HAVE LOCAL MUNICIPALITY) PERFORM A WATER PRESSURE TEST. IF RESIDUAL WATER PRESSURE IS MORE THAN 80 PSI OR LESS THAN 35 PSI, CONTACT ENGINEER TO ASSESS NEED FOR A PRESSURE REDUCING VALVE (PRV) OR A PRESSURE BOOSTER SYSTEM.
9. INSULATE HOT & COLD WATER LINES IN ACCORDANCE WITH BUILDING CODE. INSULATE COLD WATER LINES WHERE SWEATING WOULD RESULT IN STRUCTURAL DAMAGE TO BUILDING DUE TO ROTTING OF WOOD OR STAINING OF CEILING TILES.
10. LAVATORIES ARE TO BE EQUIPPED WITH CLEAN-OUT TEES BELOW.
11. ALL FIXTURES ARE TO BE EQUIPPED WITH SHUT-OFF VALVES ON SUPPLY LINES.
12. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPING AND EQUIPMENT WITH ALL OTHER TRADES PRIOR TO BEGINNING INSTALLATION TO AVOID CONFLICTS AND INTERFERENCE WITH OTHER TRADES.
13. FINAL UTILITY CONNECTIONS (GAS, ELECTRIC, WATER ETC.) TO EQUIPMENT SHALL BE MADE BY THE CONTRACTOR INSTALLING THE EQUIPMENT REQUIRING THE UTILITIES.
14. PLANS AND ISOMETRICS ARE DIAGRAMMATIC. THERE IS NO INTENT TO INDICATE ALL AND FITTINGS REQUIRED. GENERALLY, PIPING SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO AND PLUMB WITH WALL CONSTRUCTION.
15. SOIL AND WASTE PIPING SHALL BE LAID ON MINIMUM 1/4" PER FT. SLOPE FOR PIPE SIZES LESS THAN 3", AND MINIMUM 1/8" PER FT. FOR PIPE 3" AND LARGER UNLESS OTHERWISE NOTED.
16. UNLESS OTHERWISE NOTED, PLUMBING CONTRACT SHALL TERMINATE AT A POINT FIVE (5) FEET OUTSIDE THE BUILDING. FOR WORK BY OTHER CONTRACTORS OUTSIDE THE 5 FOOT TERMINATION, REFER TO SITE UTILITY DRAWINGS.
17. VALVES AND DEVICES INSIDE CHASES OR WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE PROVIDED WITH APPROPRIATELY SIZED ACCESS PANEL COMPATIBLE WITH SURROUNDING FINISHES. SUCH ACCESS PANELS SHALL BE FURNISHED BY THE PLUMBING CONTRACTOR FOR INSTALLATION BY THE GENERAL CONTRACTOR.
18. PLUMBING VENT PIPING PENETRATING ROOF SHALL BE INSTALLED BY THE PLUMBING CONTRACTOR. CUTTING OF HOLES AND FLASHING OF PENETRATIONS SHALL BE BY THE GENERAL CONTRACTOR.
19. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF WALLS AND PARTITIONS AND FOR PARTITION THICKNESS AND CONSTRUCTION MATERIALS.



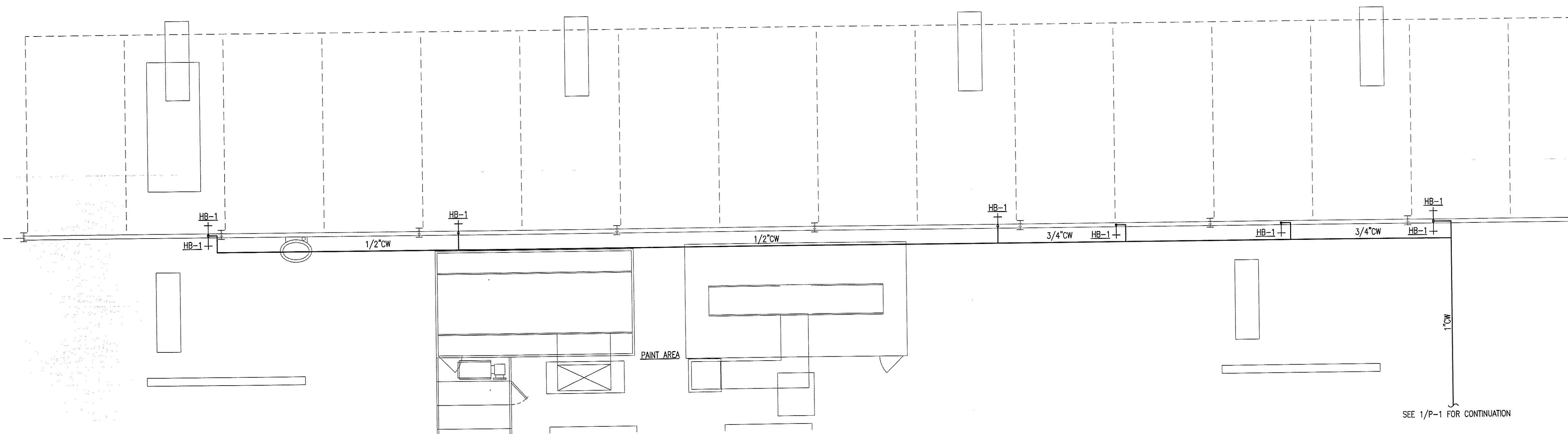
1
ENLARGED OFFICE
WATER PIPING PLAN
SCALE: 3/16" = 1'-0"



WATER HEATER SCHEDULE							
MARK	TANK VOLUME	RECOVERY	TEMPERATURE RISE	ELEMENT SIZE	POWER	MANUFACTURER	MODEL
EWH-1	30 GAL.	18 GPH	100°	4.5 KW	208/1Ø	RHEEM-RUUD	EGSP30



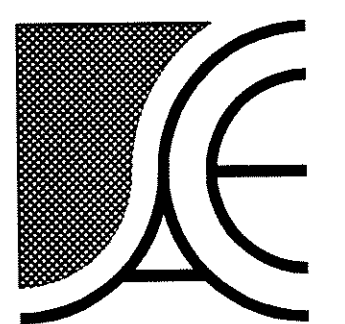
2
ENLARGED WASH BAY
WATER PIPING PLAN
SCALE: 3/16" = 1'-0"



3
ENLARGED SHOP
WATER PIPING PLAN
SCALE: 1/8" = 1'-0"

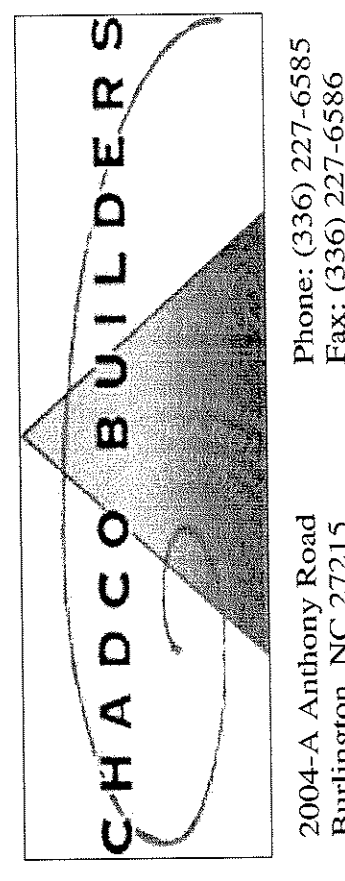
PIPING LEGEND	
SYMBOL	DESCRIPTION
H	HOT WATER
C	COLD WATER

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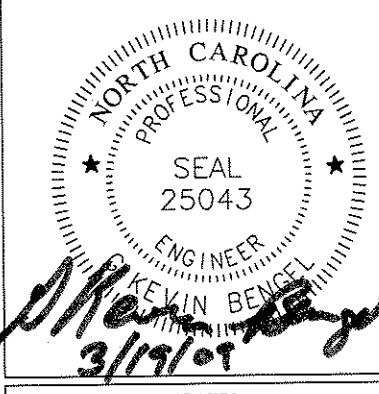


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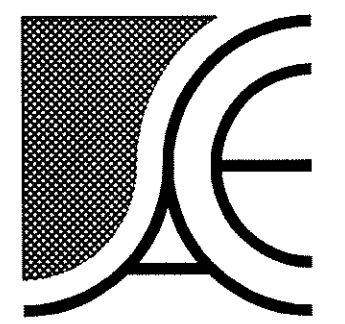
**NEW BUILDING FACILITY:
DARRELL ALLEN
BODY SHOP**
Burlington, North Carolina

DRAWING NAME
ENLARGED WATER PIPING PLANS



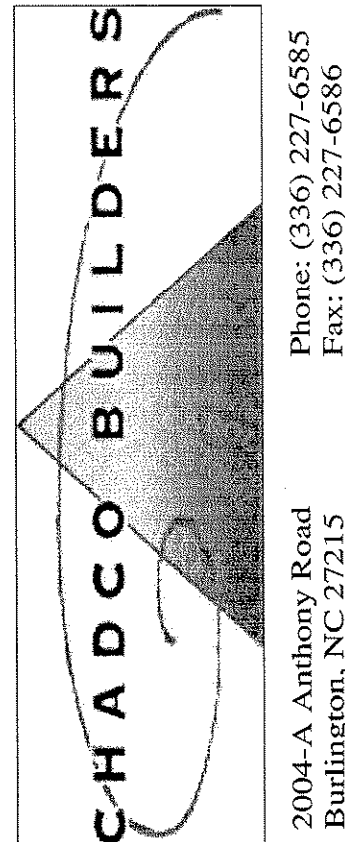
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DATE
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JOB NO.
9008
SHEET

P-3



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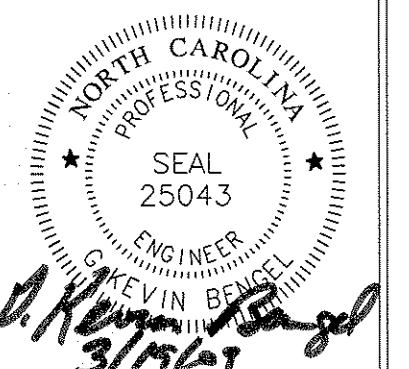
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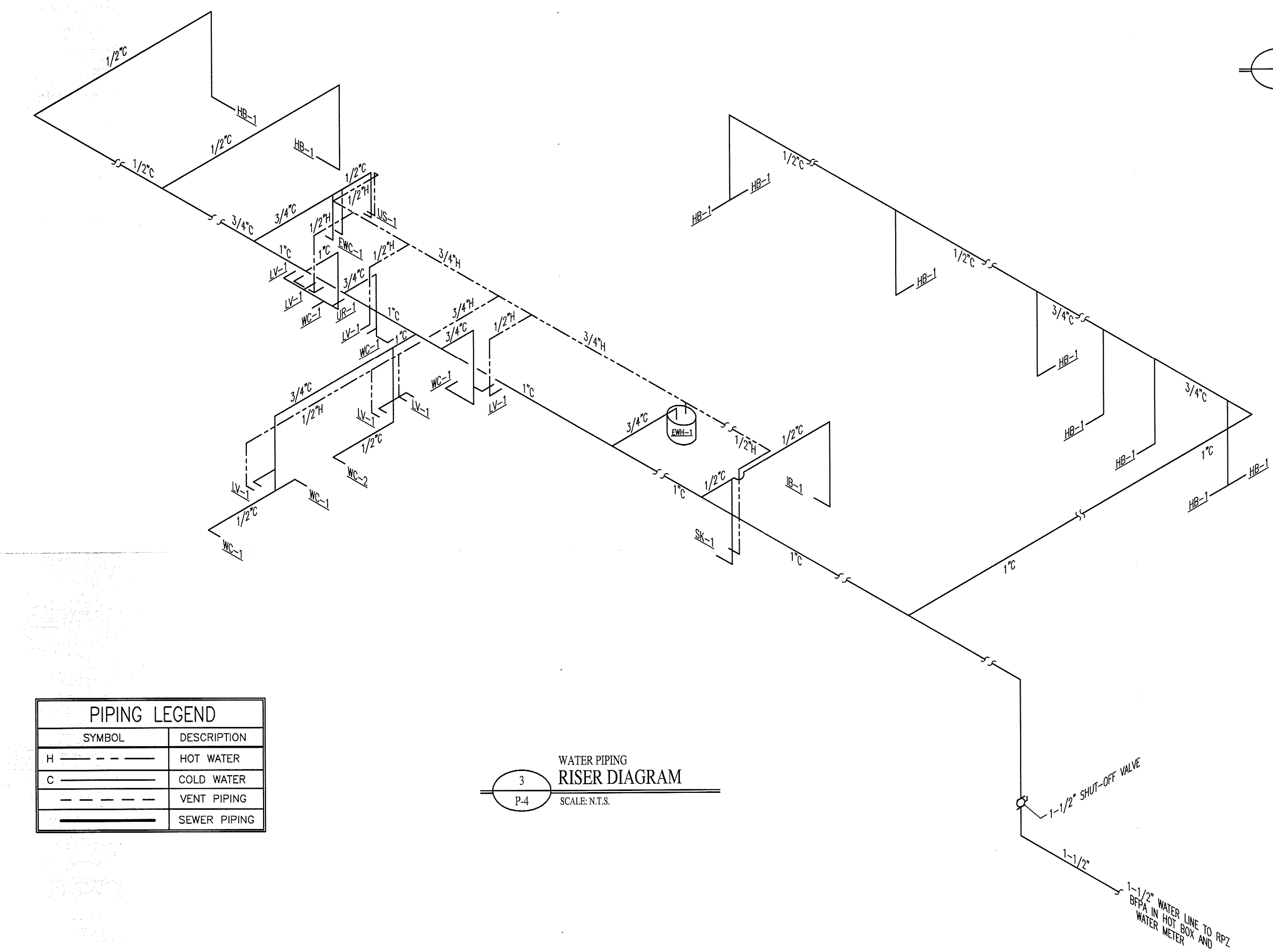
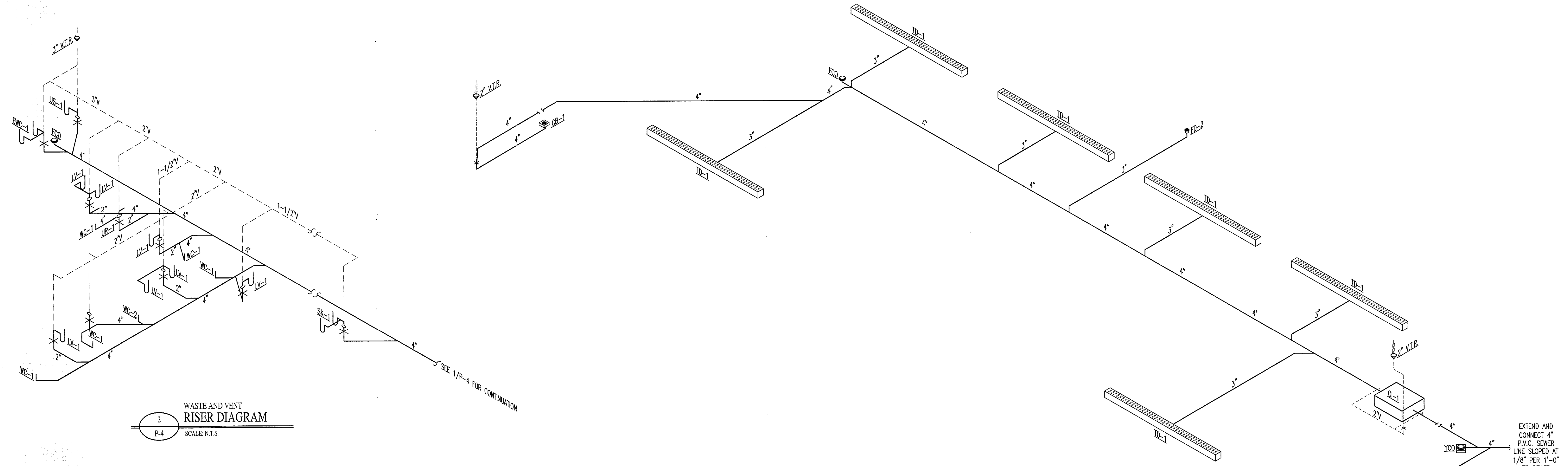
**NEW BUILDING FACILITY:
DARRELL ALLEN
BODY SHOP**
Burlington, North Carolina

DRAWING NAME
**WASTE & WATER
RISER DIAGRAMS**



DATE
3/18/09
SCALE
AS NOTED
JOB NO.
9008
SHEET

P-4



PIPING LEGEND

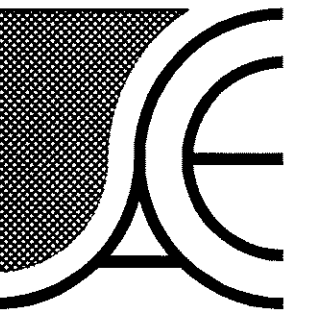
SYMBOL	DESCRIPTION
H	HOT WATER
C	COLD WATER
V	VENT PIPING
S	SEWER PIPING

3
P-4
WATER PIPING
RISER DIAGRAM
SCALE: N.T.S.

1
P-4
WASTE AND VENT
RISER DIAGRAM
SCALE: N.T.S.

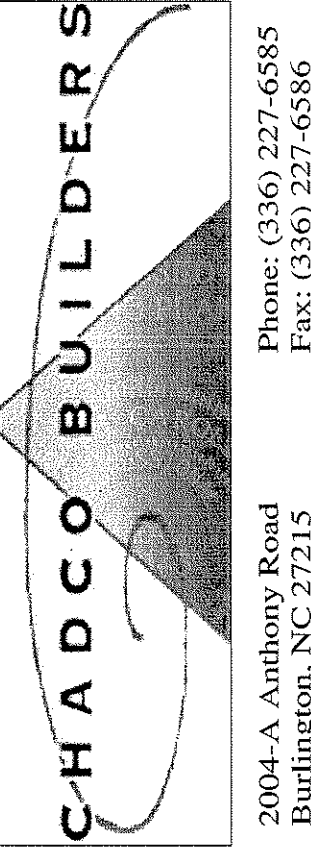
2
P-4
WASTE AND VENT
RISER DIAGRAM
SCALE: N.T.S.

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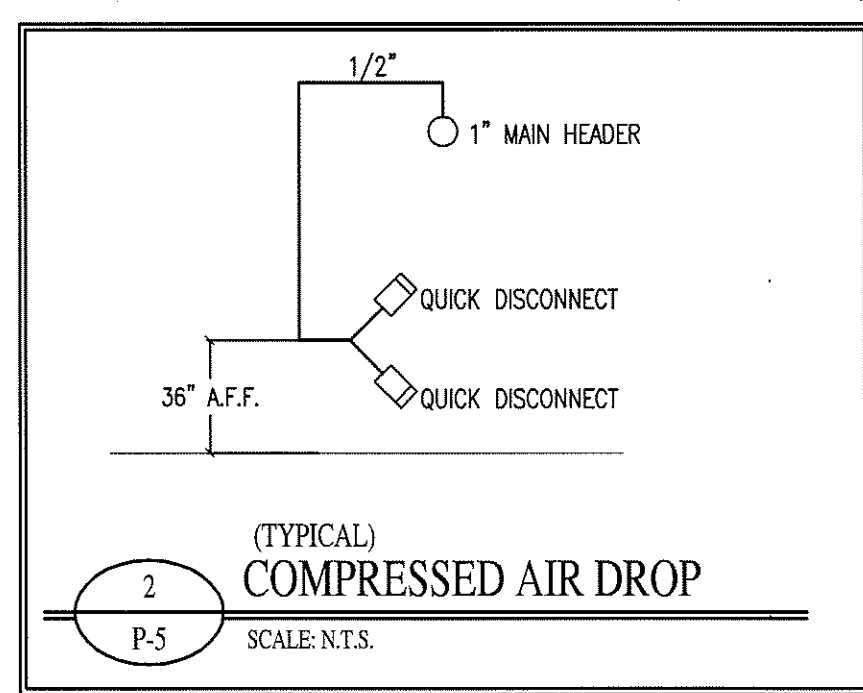
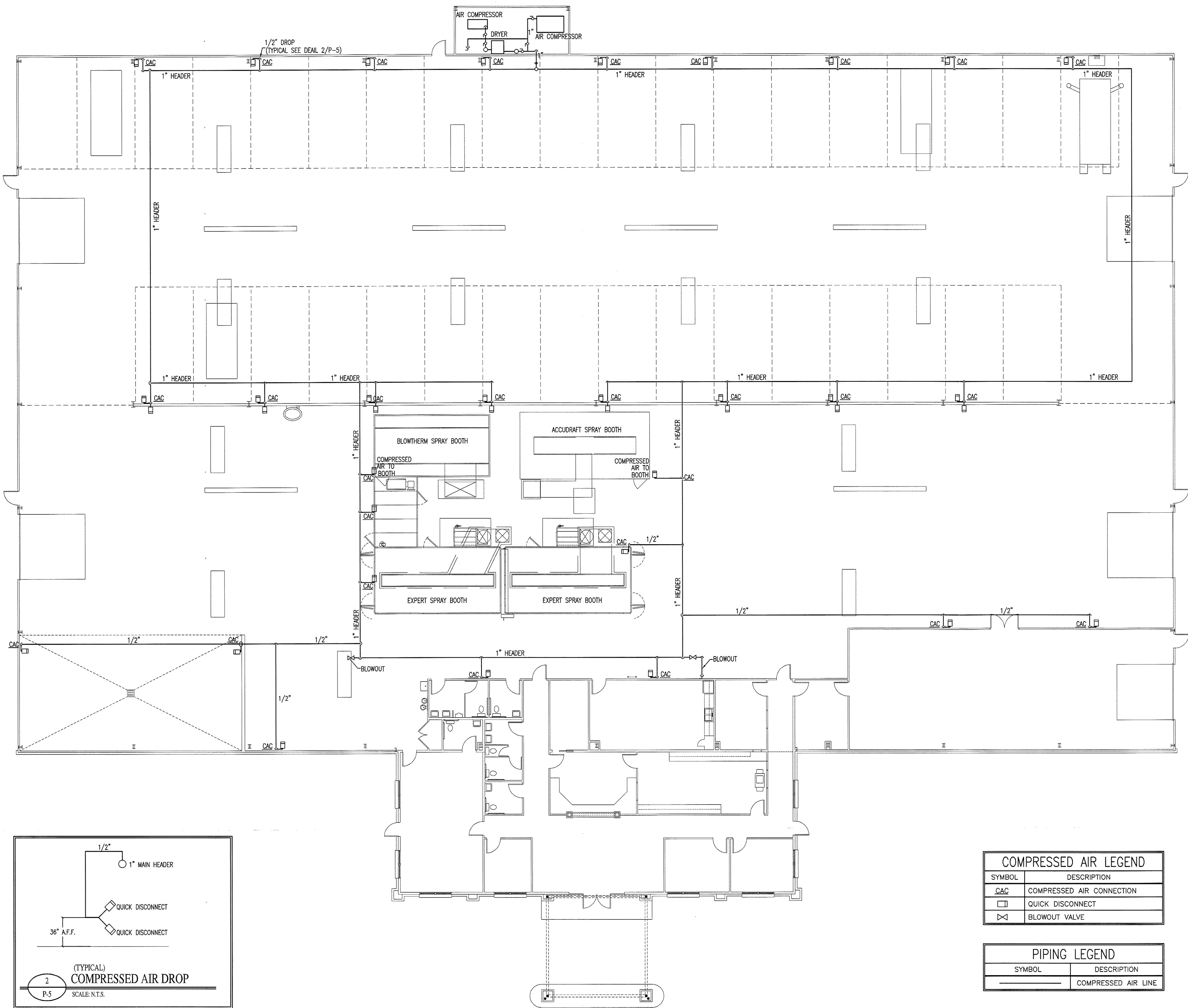
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**NEW BUILDING FACILITY:
DARRELL ALLEN
BODY SHOP**
Burlington, North Carolina

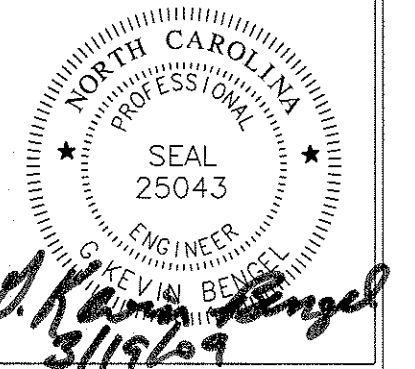


COMPRESSED AIR LEGEND	
SYMBOL	DESCRIPTION
CAC	COMPRESSED AIR CONNECTION
□	QUICK DISCONNECT
⊗	BLOWOUT VALVE

PIPING LEGEND	
SYMBOL	DESCRIPTION
—	COMPRESSED AIR LINE

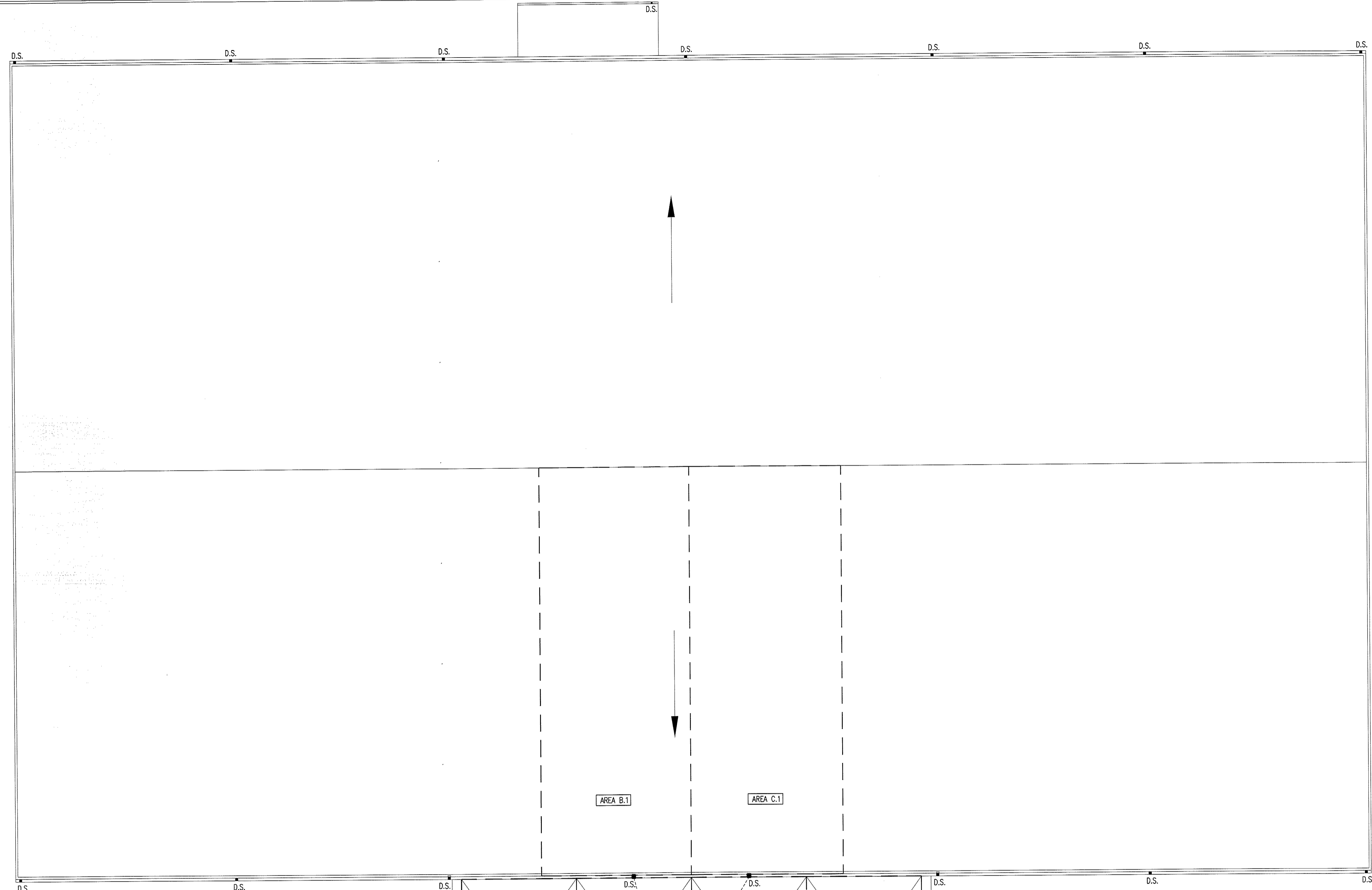
1
COMPRESSED AIR PIPING PLAN
SCALE: 3/32" = 1'-0"

DRAWING NAME:
COMPRESSED AIR PIPING PLAN

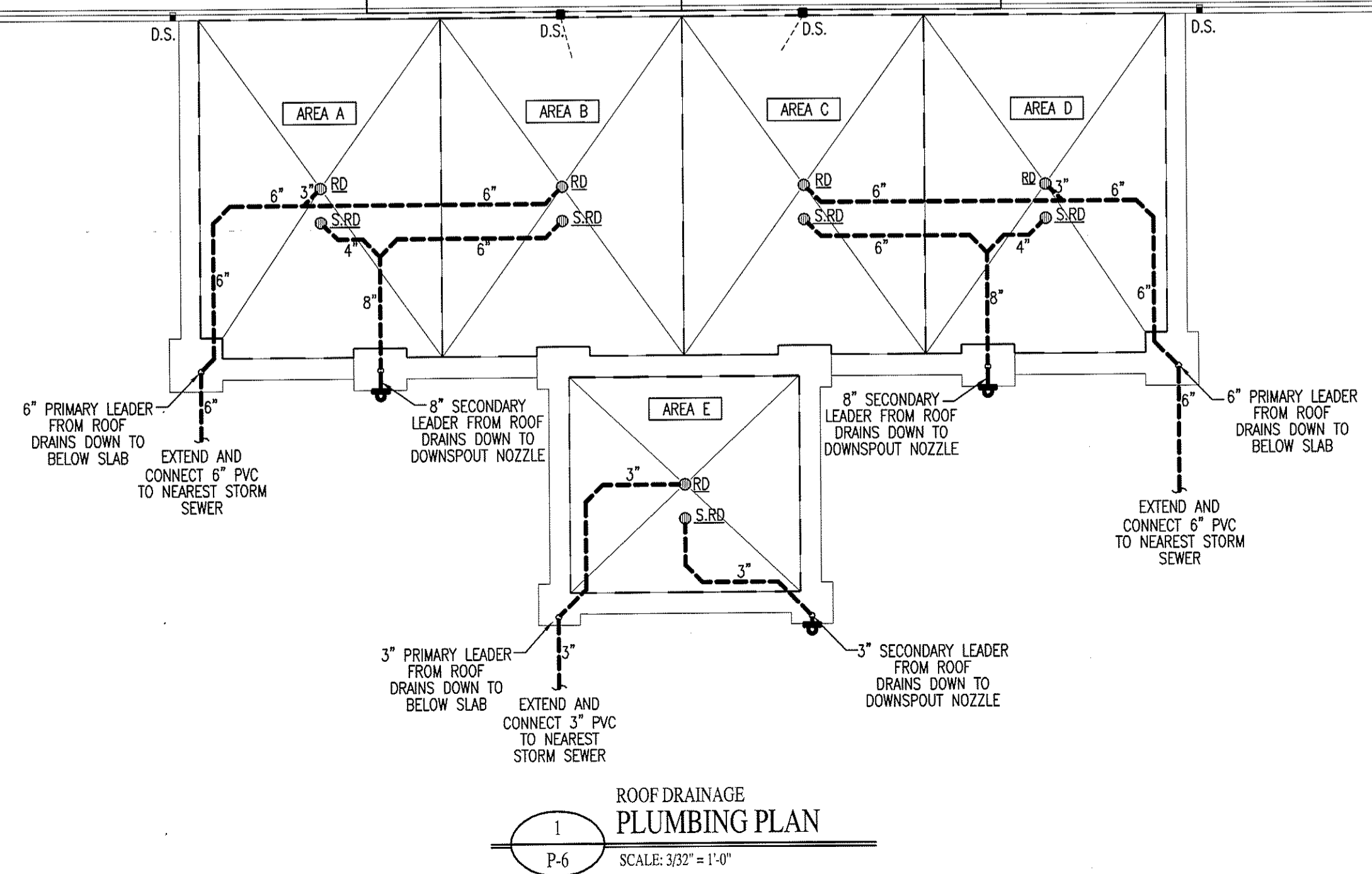
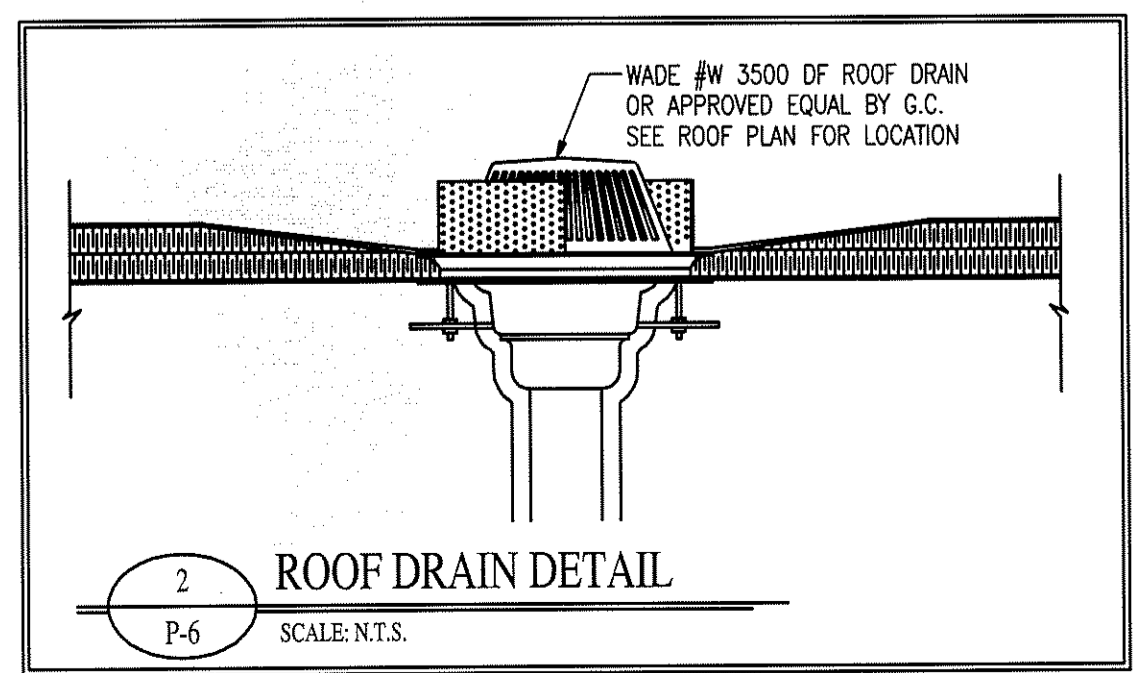


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CHECKED: MK
DATE: 3/18/09
SCALE: AS NOTED
JOB NO.: 9008
SHEET:

P-5



PIPING LEGEND	
SYMBOL	DESCRIPTION
---	ROOF DRAINAGE



ROOF DRAIN LEADER CALCULATIONS			
RAINFALL RATE FOR PRIMARY ROOF DRAINS 100-YEAR, 60 MINUTE PRECIPITATION FIGURE 1106.1 = 3.5 IN./HR.	REQ. HORIZ. DRAIN PER TABLE 1106.3	REQ. VERT. LEADER PER TABLE 1106.2	
AREA A - S.F. OF ROOF	625 S.F.		
1/2 AREA OF VERTICAL WALLS	43 S.F.		
TOTAL PROJECTED ROOF AREA	668 S.F.	3"	3"
AREA B (INCLUDES AREA B.1) - S.F. OF ROOF	2714 S.F.		
1/2 AREA OF VERTICAL WALLS	50 S.F.		
TOTAL PROJECTED ROOF AREA	2764 S.F.	6"	6"
AREA C (INCLUDES AREA C.1) - S.F. OF ROOF	2742 S.F.		
1/2 AREA OF VERTICAL WALLS	50 S.F.		
TOTAL PROJECTED ROOF AREA	2792 S.F.	6"	6"
AREA D - S.F. OF ROOF	625 S.F.		
1/2 AREA OF VERTICAL WALLS	43 S.F.		
TOTAL PROJECTED ROOF AREA	668 S.F.	3"	3"
AREA E - S.F. OF ROOF	383 S.F.		
1/2 AREA OF VERTICAL WALLS	42 S.F.		
TOTAL PROJECTED ROOF AREA	425 S.F.	3"	3"
SIZE OF HORIZONTAL STORM DRAINAGE PIPING INTERPOLATED FROM TABLE 1106.3			
3" HORIZONTAL PIPING @ 1% SLOPE AT 3.5 INCHES/HOUR = 939 S.F.			
SIZE OF HORIZONTAL STORM DRAINAGE PIPING INTERPOLATED FROM TABLE 1106.3			
4" HORIZONTAL PIPING @ 1% SLOPE AT 3.5 INCHES/HOUR = 2,149 S.F.			
SIZE OF HORIZONTAL STORM DRAINAGE PIPING INTERPOLATED FROM TABLE 1106.3			
6" HORIZONTAL PIPING @ 1% SLOPE AT 3.5 INCHES/HOUR = 6,113 S.F.			
SIZE OF VERTICAL STORM DRAINAGE PIPING FROM TABLE 1106.2			
3" VERTICAL PIPING AT 3.5 INCHES/HOUR= 2,200 S.F.			
SIZE OF VERTICAL STORM DRAINAGE PIPING FROM TABLE 1106.2			
6" VERTICAL PIPING AT 3.5 INCHES/HOUR= 13,500 S.F.			

SECONDARY ROOF DRAIN LEADER CALCULATIONS			
RAINFALL RATE FOR SECONDARY ROOF DRAINS 100-YEAR, 15 MINUTE PRECIPITATION FIGURE 1106.1(a) = 7.2 IN./HR.	REQ. HORIZ. DRAIN PER TABLE 1106.3	REQ. VERT. LEADER PER TABLE 1106.2	
AREA A - S.F. OF ROOF	625 S.F.		
1/2 AREA OF VERTICAL WALLS	43 S.F.		
TOTAL PROJECTED ROOF AREA	668 S.F.	4"	4"
AREA B (INCLUDES AREA B.1) - S.F. OF ROOF	2714 S.F.		
1/2 AREA OF VERTICAL WALLS	50 S.F.		
TOTAL PROJECTED ROOF AREA	2764 S.F.	6"	6"
AREA C (INCLUDES AREA C.1) - S.F. OF ROOF	2742 S.F.		
1/2 AREA OF VERTICAL WALLS	50 S.F.		
TOTAL PROJECTED ROOF AREA	2792 S.F.	6"	6"
AREA D - S.F. OF ROOF	625 S.F.		
1/2 AREA OF VERTICAL WALLS	43 S.F.		
TOTAL PROJECTED ROOF AREA	668 S.F.	4"	4"
AREA E - S.F. OF ROOF	383 S.F.		
1/2 AREA OF VERTICAL WALLS	42 S.F.		
TOTAL PROJECTED ROOF AREA	425 S.F.	3"	3"
SIZE OF HORIZONTAL STORM DRAINAGE PIPING INTERPOLATED FROM TABLE 1106.3			
3" HORIZONTAL PIPING @ 1% SLOPE AT 7.2 INCHES/HOUR = 457 S.F.			
SIZE OF HORIZONTAL STORM DRAINAGE PIPING INTERPOLATED FROM TABLE 1106.3			
4" HORIZONTAL PIPING @ 1% SLOPE AT 7.2 INCHES/HOUR = 1,044 S.F.			
SIZE OF HORIZONTAL STORM DRAINAGE PIPING INTERPOLATED FROM TABLE 1106.3			
6" HORIZONTAL PIPING @ 1% SLOPE AT 7.2 INCHES/HOUR = 2,972 S.F.			
SIZE OF HORIZONTAL STORM DRAINAGE PIPING INTERPOLATED FROM TABLE 1106.3			
8" HORIZONTAL PIPING @ 1% SLOPE AT 7.2 INCHES/HOUR = 6,333 S.F.			
SIZE OF VERTICAL STORM DRAINAGE PIPING FROM TABLE 1106.2			
3" VERTICAL PIPING AT 7.2 INCHES/HOUR= 1,100 S.F.			
SIZE OF VERTICAL STORM DRAINAGE PIPING FROM TABLE 1106.2			
8" VERTICAL PIPING AT 7.2 INCHES/HOUR= 14,500 S.F.			

- NOTES:
1. ROOF DRAIN AREAS INCLUDE 1/2 OF PARAPET HEIGHTS.
 2. INSULATE HORIZONTAL ROOF DRAIN PIPING WITH 1/2" CLOSED CELL FOAM INSULATION.
 3. HORIZONTAL PIPE TO BE RAN AT 1/8" PER FOOT OR MORE.
 4. RD INDICATES ROOF DRAINS.
 5. S.RD INDICATES SECONDARY ROOF DRAINS.

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NEW BUILDING FACILITY:
DARRELL ALLEN BODY SHOP
Burlington, North Carolina

DRAWING NAME:
ROOF DRAINAGE PLUMBING PLAN

DRAWN: CCM
CHECKED: MKR
DATE: 3/18/09
SCALE: AS NOTED
JOB NO.: 9008
SHEET:

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